



THE KEYSTONE

# Defender

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STATE COUNCIL OF CIVIL DEFENSE, HARRISBURG, PA.

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## WHAT THEY SAY ABOUT DISPERSION . . .

GOVERNOR PETERSON, of the FCDA, has been travelling the length and breadth of the United States, preaching that we must disperse and evacuate our cities, because of the new weapons. Pennsylvania's point of view was expressed in the April Defender in the article entitled "No New Plan Yet." Let us look at what others are saying across the country:

LT. GEN'L HUEBNER, of N. Y. State:

"If an enemy is going to bomb any major city, they are not going to give us sufficient time for evacuation." He added, "Many lives might be saved by a smoothly functioning civil defense organization . . . and by shelters."

GENERAL HESKETH, of Conn.:

"There is no use planning an evacuation of cities until the new radar system is somewhere nearer use."

PRESTON LEE, of Delaware:

"The dispersal planning bulletin is premature and only adds to the confusion by being made public at this time. The Air Force cannot guarantee us any advance warning in case of an attack, so it is useless to practice advance warning drills at this time."

The Ohio Target Area Civil Defense Directors met in a closed session with the executive committee of the Ohio Committee of Civil Defense, and drafted a letter which was sent to Governor Peterson, asking him immediately to "de-emphasize" publicity regarding pre-attack dispersal of population; "Until a guarantee of sufficient time is provided by defense officials to effect an orderly dispersal of major population centers."

A report of the Ohio meeting declared that present FCDA emphasis on tactical dispersal is "ill-conceived" and "tends toward public acceptance that this plan is now in operation

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## THE H-BOMB HAS LIMITS

BY

JOSEPH AND STEWART ALSOP

(Reprinted with permission)

ONLY A CANDIDATE for the madhouse would attempt to be reassuring about the hydrogen bomb.

Yet a great deal of nonsense has been written about the bomb, especially in the first two weeks after the tests. And, unless the country is to adopt hopeless defeatism as a national policy, it is important to understand that the power of the weapons, while in theory, without limit, is in practice limited.

Take, for example, the final test in the March series in the Pacific. This is supposed to develop a power of forty megatons, or about two thousand times the power of the bomb that destroyed Hiroshima. Even this may be an underestimate, however, since advance estimates have an odd way of going wrong, where the hydrogen bomb is concerned.

The first hydrogen bomb, tested in November 1952, was expected to generate power of less than one megaton, and developed instead about five megatons. The second, tested on March 1 of this year, was expected to develop between four and six megatons. It "surprised and astounded" the scientists (to quote President Eisenhower) when it exploded with fourteen-megaton force. The third hydrogen bomb was supposed to develop a power of about three megatons, and, most surprising of all, instead it developed close to seventeen.

Thus the biggest of the big bangs, if it is permitted to go through on schedule, could quite conceivably fool the scientists again, and develop several times the expected power.

But does this mean that the hydrogen tests are "getting out of hand"?

Does it mean that the hydrogen bomb has the power to destroy everything within a radius of 450 miles, or that a single bomb could blast the whole British Isles?

Such statements have been widely repeated in the last few weeks. If they are true, a resigned despair is the only sensible national attitude; it is obviously simple folly to talk about air defense, civil defense, or any other kind of defense, if a mere handful of bombs can destroy the whole continental land mass. But such statements are not true at all.

To be sure, it is theoretically possible to build into a "thermonuclear" device any amount of power, a million megatons or more. But for practical reasons, the million-megaton bomb will almost certainly never be built.

What matters to the weaponer is not how much power a bomb theoretically develops. What matters is how much of the target it actually destroys, and whether it can be delivered on the target.

A phenomenon known as the "limit of blow-out" curtails the lateral destruction of the hydrogen bomb; after about fifty megatons, there is no appreciable increase in lateral destruction, because all additional power is dissipated in the relatively non-resistant upper atmosphere. Thus even if the forthcoming test in the Pacific does develop several times the fifty-megaton power anticipated, the actual difference in destructive radius will only be a couple of miles or so.

But this is by no means the only limitation. As more power is built into a hydrogen bomb, it becomes more

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# WARNINGS

SO THAT THERE MAY be no misunderstanding concerning the warning signals and the official instructions concerning people's conduct under emergency conditions, Dr. Gerstell summarized them as follows in Information Circular No. 47 (1/26/54):

The three standard types or conditions of warning now in effect are:

## 1) Yellow

This means "attack by hostile aircraft is probable," but it implies no fixed factor of time in advance of attack. Warning "yellow" is now very likely to be fanned out nationwide should hostile aircraft be detected approaching the continental limits of the United States from any direction. In such instances, the warning probably will be supplemented by reasons for its issuance, transmitted by Conelrad and other means. For example, there might be a radio "flash" to the effect that "The present warning Yellow is occasioned by the sighting of hostile aircraft approaching the California coast."

The "yellow" signal is a flashing of the yellow lamp and long-spaced intermittent ringing of the bell on the bell-and-lights system. Also transmitted as "Warning Yellow" on telephone and radio. It shall be publicly disseminated by all available means *except* sirens, horns, whistles and bells. The yellow warning may, or may not, be followed by a Red, but it will always be followed by a White, or All-Clear signal, disseminated in accordance with instruction set forth in sub-paragraph 3) below. Condition "yellow" may last for minutes, hours,

or even several days. It extends from the time of receipt of the "yellow" signal until a following "red" or "white" signal is issued.

## 2) Red

This means "attack by hostile aircraft is imminent." It implies 8-10 minutes possible (but not guaranteed) advance warning of attack.

Warning "red" is now likely to be fanned out statewide in the event of an anticipated attack not only in Pennsylvania but also on nearby states. The "red" signal is a flashing of the red lamp, and short-spaced, intermittent ringing of the bell on the bell-and-lights system. Also transmitted on telephone and radio as "warning red."

It shall immediately be disseminated to the public in the form of a three-minute fluctuating, or "warbling" of sirens; a series of short horn or whistle blasts, lasting a total of three minutes; or a combination of the two.

The "Red" signal may, or may not, be preceded by a "yellow"; it sometimes may be followed by one or more additional "reds"; it will always be followed by public sounding of the "white" or "all-clear" signal. (See para. 3) below).

Condition "red" which also may last minutes, hours, or even several days, extends from the time of receipt of a "red" signal until public sounding of a following "white," or "all-clear."

## 3) White

The "white" or "all-clear" means "attack by hostile aircraft is improbable." The signal is a flashing of the white lamp and long-ringing of the bell on the bell-and-lights system. Also transmitted on telephone and radio as "signal White" and "all-clear."

When the "All-clear" is issued following a "yellow" but without an intervening "red," the "white" signal shall be publicly disseminated by all available means *except* sirens, horns, whistles, and bells, as in the case of "warning yellow."

In the event of a "white" following a "red," and regardless of whether or not the "red" or "reds" has been preceded by a "yellow," the "White" shall be disseminated promptly to the public by sirens, horns or whistles in the form of a one-minute steady blast, followed by another 2-minute period of silence; and finally, a third one-minute steady blast, thus taking up seven minutes in all.

"Condition White" is the normal condition, in effect at all times except during conditions "Red" or "Yellow."

(Special note: "yellow," "red," and "white" are the only types or conditions of warning now in effect. The "blue" signal was incorporated in the bell-and-lights system in anticipation of possible changes in federal regulations. It is now used solely as a part of the weekly equipment test in the system.)

## What Should People Do?

### 1) During "Condition Yellow":

No general instructions governing conduct of the public as a whole apply. On the basis of information received through Conelrad or other official sources, individuals will, however, be expected to exercise careful judgement as to the wisdom of undertaking non-essential activities, such as departure on trips and the like.

Similarly, hospitals may deem it advisable to postpone start of scheduled operations, while some industries likewise may undertake curtailment of certain manufacturing activities. County and local Civil Defense organizations will be expected to alert key personnel, activate control centers and undertake such additional mobilization as may be indicated by supplemental information officially provided in connection with the issuance of "Warning Yellow."

### 2) During "Condition Red":

Immediately upon the sounding of the "red" signal, the general public will be expected to "take cover," and remain there until the "white" or "all-clear" sounds, or until otherwise instructed to act by local civil defense officials. At the same time, *civil defense workers will report to their assigned stations*, where they will either carry out previously assigned duties or else await instructions from their respective leaders. Fire-fighters, medical teams, rescue crews, and other civil defense groups will be ordered into action as circumstances warrant. Such orders may often precede the sounding of the "white" or "all-clear" signal.

### 3) During "Condition White," or "All-Clear":

Except as otherwise directed by local civil defense officials, both the general public and civil defense workers will resume normal activities upon receipt of the "White" or "All-Clear" signal.

THE WARNINGS AND INSTRUCTIONS SUMMARIZED ABOVE WILL REMAIN IN EFFECT UNTIL SUCH TIME AS OFFICIAL NOTICE OF CHANGE MAY BE ISSUED BY THE STATE COUNCIL OF CIVIL DEFENSE.

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Free subscriptions to this publication may be obtained by writing to the State Council of Civil Defense, Capitol Building, Harrisburg, Penna. Address: Miss Alison Raymond, Editor.



# MOBILITY—HAVE YOU GOT IT?

FOR THREE YEARS we have been preaching the need for mobility. Disaster plans will work in time of emergency **ONLY** if they are based on the principle of mobile teams of trained people who could be moved quickly, with their equipment, to the periphery of a bombed area.

We can never tell what the exact target will be. Bombs may hit where they are intended, or they may land many miles off-course; if they come as guided missiles, or are delivered by saboteurs, they may explode anywhere. New weapons cover a larger area, but they in no way change the principles. There still will be:

- 1) Stricken areas;
- 2) Fringe areas surrounding the target, in which help will be desperately needed;
- 3) Undamaged areas from which such help must come.

Help must come quickly, in an organized orderly way; therefore we must plan for mobility from the start.

What does this mean?

It means that every First Aid team, every canteen team, every rescue unit, every auxiliary fire team, should have transportation attached to it, so that if it were needed 100 miles away, it could move as a self-sufficient and coordinated team to whatever location it was ordered.

Note the word "self-sufficient." In

addition to providing its own transportation, each team should have with it its necessary tools, and also enough food and blankets so that its members would be self-sustaining for the first few chaotic days, not adding to the problems of the damaged region.

Few localities are planning with this in mind. Most are thinking wholly in terms of their own community. If your community is damaged, naturally your teams would not move away. But if a city 50 miles away were hit, it is inconceivable that your men and women would not immediately want to help. True, some of them would be preparing facilities in your town to receive casualties; but others would go, as units, to render help on the spot. That is the picture that we must keep in view; we must plan how to send this aid in the most effective possible way.

Many counties have established points on their periphery known as "gateways," through which help coming to their county will be channeled. The neighboring counties know where those locations are. Incoming teams—be they heavy bulldozers, fire engines, surgical teams, or whatever—will, on orders, report to the designated gateway. There they will receive more detailed instructions, guides if necessary, gasoline and food, if necessary. In this way, there will be control and

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# ATOMIC BOMBS CAN BE SMUGGLED

THE FEDERAL BUREAU of Investigation has warned all police agencies that it is now possible for enemy agents to smuggle compact atomic sabotage bombs into the United States. The information they sent out was authorized by President Eisenhower, The National Security Council and the Atomic Energy Commission.

Quietly the FBI has distributed a description and measurements of two atomic devices to all law enforcement officials on state and even local levels.

Both sabotage devices could be shielded by metal or plastic, and so defy detection by geiger counters.

The ability to reduce atomic weapons to small, easily disguised and hidden shapes poses a serious problem for the United States with its lightly patrolled borders. It must also be considered as another factor making advance warning of enemy attack unlikely, and thus having bearing on the practicality or impracticality of widespread advance dispersal. The bombs could be brought into the country in diplomatic pouches which do not undergo examination, or they could even pass through the mails. It is for this reason that the warning, previously sent only to Immigration and Customs authorities, has now been extended to all police forces.

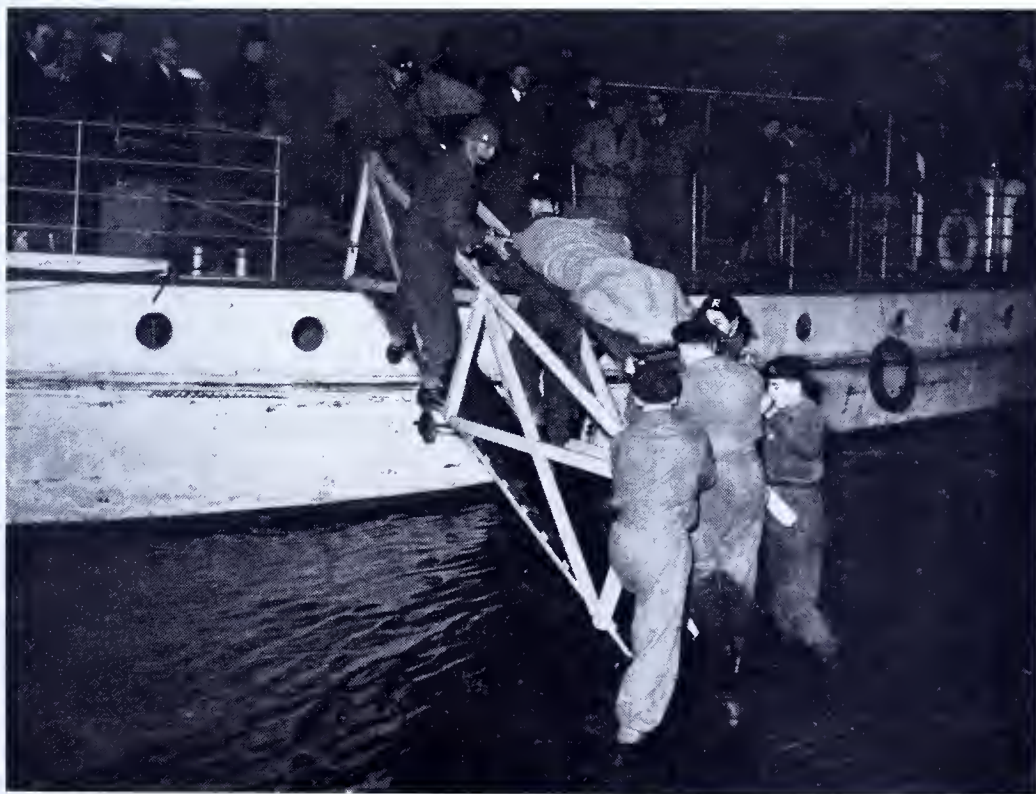
The official description pointed out that fifty pounds of uranium or platinum would be no larger than a softball. The bulletin sent to the police explains how this sphere could be surrounded by charges of conventional high explosives to create an "implosion," a bursting inward to compress, and thus set off the fissionable material.

Since such a device could be machined into any sort of shape "we should be alert regarding any article that is extremely heavy for its size," the description asserted. "Pieces which might be smuggled would probably be of a size that could be carried on the person."

Conventional explosives are usually light tan in color, have a soapy feel and are half again as heavy as an equal quantity of water.

The high explosive of implosion will probably be in specially fabricated shapes, one side of which will be of a spherical surface; the second device is of a gun-barrel type. The length of the barrel need not be more than

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*(Photo from British Info. Services)*

*Some communities will use water to increase their mobility. British here are practicing the evacuation of injured by boat.*



# TWO-EDGED CIVIL DEFENSE

BY ROBERT L. MOORA

*(The following article is reprinted, with permission, from the New York Herald Tribune "This Week" Magazine of Feb. 14, 1954.*

*We are reprinting it partly because it is important that we know what our neighboring states are doing; partly because we believe New Jersey is making real progress by coordinating civil defense with disaster control planning.)*

CIVIL DEFENSE is a term that more often than not strikes a note of apathy in Americans, as its administrators long ago found out. The reason, they say, is that to most people an atomic attack on their community is too gigantic and too hideous to comprehend.

The state of New Jersey has found a way around this apathy—a way so effective that one of every 20 Jerseyites is enrolled. Rather than concentrate only on A-bomb preparations, New Jersey has chosen to plan for handling local disasters—train wrecks, plane crashes, factory explosions or even multi-car auto accidents.

The result is an organization which has already proved itself in major disasters—and at the same time is ready for bigger things to come. This unique setup is known as the "Disaster Control Plan"; it became a part of state law with this past year's session of the legislature. Here is an example of how it has gained support so far:

Leonard Dreyfuss, a Newark advertising man and dollar-a-year head of New Jersey's civil defense for the 12 years since Pearl Harbor, was describing the state's disaster program to a brewery president.

"It may seem incongruous," he said, "but we even have 2000 laundry trucks assigned to specific tasks in case of a big emergency."

His visitor spoke up: "We have a big fleet of trucks. How could they fit in?"

Dreyfuss made a few suggestions. Today a score of the brewery's trucks are equipped with 50 feet of rope each, a fire extinguisher, a first aid kit, a stretcher and other items that would come in handy in case of an automobile accident—or an A-bomb attack. One of these trucks gave yeoman service in rescue work in the 1953 tornado in Massachusetts.

## *The Network Works.*

The driver of each, like the drivers of hundreds of other similarly equipped vehicles in the state, rides the highways fully aware that he is operating

not just a truck but an auxiliary police emergency vehicle.

By such means—by appealing to the urge for the exciting—New Jersey has accomplished the formidable feat of enlisting upwards of 252,000 of its almost 500,000,000 in the civil defense program.

Besides 50,000 trained auxiliary police, they include: a network of auxiliary fire services, 35,000 strong; a series of communications systems, employing the state's 24 radio and TV stations, thousands of "ham" radio operators, and the radio frequencies of the forest rangers, to provide alternate means of communications if the telephones and police teletypes go out; a transportation pool of railroads, bus lines, truck companies and even airlines, with 11,000 employees; a staff of 20,000 welfare workers, professional and volunteer; a ground observer corps of 4000; 1000 clergymen, and, of course, the largest group of all, the air raid wardens, numbering 60,000.

This sprawling network of volunteers has been tested, both by design and by actual disaster, and it works—with kinks, naturally, but it works:

At 8:15 on a Sunday evening, the telephone rang in the Princeton home of Thomas S. Dignan, who is the system's deputy director.

It was the state police headquarters. There had just been a wreck on the Pennsy. How bad, they didn't know.

"Okay," said Dignan. "Let's get moving."

A wreck could be a major disaster, necessitating quick and capable rescue work. Or—it could be a minor mishap. It took just eight minutes for state police to determine that the accident was minor. But in those eight minutes the following had happened:

16 police departments in a seven-mile radius had been alerted; two hospitals in New Brunswick, the nearest big town, had been asked to send ambulances; and in one town, more disaster conscious than most, the whole emergency mobilization plan had been put in motion—doctors, nurses, police, firemen, even amateur radio operators ready to move in.

The alarms have not always been false. Auxiliary police, medical and rescue teams, and others were quickly on the scene at the South Amboy ammunition blast of 1950, the Woodbridge train wreck the following year,

and the three Elizabeth plane crashes of 1951-52.

Those five disasters showed officials many flaws in their operation. One of the most serious, ironically, was a super-abundance of volunteers. Such was the case, to some extent, in the first two Elizabeth plane crashes. In the third, however, auxiliary police quickly and competently relieved local police of the vexing task of handling traffic. "It would have been a hell of a mess without them," said an Elizabeth police captain later.

New Jersey's disaster-control measures are not entirely an outgrowth of the atomic age. Their development pre-dates World War II and had their beginnings as an anti-sabotage program, developed when authorities became uneasy about German-American bonds in northern New Jersey.

At the request of the governor, the state police undertook a myriad of duties that never had concerned them before—and each ultimately became a part of the Disaster Control plan that is today the backbone of New Jersey's civil defense.

First, they launched a complete inventory of protection facilities everywhere in the state. They catalogued every piece of police and fire equipment, every hydrant, every water main, every hospital bed, every dealer and manufacturer of drugs—in short everything that might be useful to know in case of emergency. This catalogue is still reasonably up-to-date.

Next, they made a card-index of every bridge and tunnel in New Jersey, with the clearance and weight capacity of each. Using this, with other highway data, they mapped routes for convoys. Then with the Army, they designated military roads that would be barred to civilians in emergencies.

They surveyed some 1500 of the state's manufacturing plants, noting all the details of layout and facilities. They pointed out possible points of sabotage, gave courses for plant guards. And they are doing the same thing today.

At the Army's request, they prepared an almost unbelievably detailed report on the state's watersheds. Likewise, they blueprinted the oil and gas lines entwined under the state's surface, and the telephone circuits.

The bulk of this had been accomplished when, on Dec. 8, 1941, Drey-

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# A DOCTOR LOOKS AT RADIATION

BY

BRIG. GEN. ELBERT DECOURSEY, U.S.A

*Brigadier General Elbert DeCoursey is Director of the Armed Forces Institute of Pathology which is charged with the care and study of the files of case histories gathered by the Atomic Bomb Casualty Commission in Japan. This material is taken, with permission, from articles written by Gen'l DeCoursey for "The American Weekly."*

AS A MEMBER of the Joint Army-Navy Commission authorized by General Douglas MacArthur, I examined a constant stream of A-bomb survivors and performed countless autopsies on the bodies of those who had died. The effect of the A-bomb has remained my principal study ever since. Our findings can help Americans answer the two important questions about an attack with new weapons:

- 1) How can I increase my chances of survival?
- 2) If I survive, what problems will I face?

In Hiroshima, which had a pre-bomb population of 255,200, there were about 65,000 deaths. We know for certain that 50% of the dead could have been saved if the Japanese had used American methods of defense.

Burn victims—most of whom could have been saved by U. S. style medical treatment—died by the hundreds. Today, bomb victims would be treated with new and powerful antibiotics, pressure drugs, and plasma concentrates. New first aid methods will make the mass treatment of victims much more efficient and effective.

Because there was no one to tell the people of Hiroshima and Nagasaki that it was safe to return to their homes after the blast, thousands of survivors fled what they believed to be the doomed city. Had these people remained to form rescue parties, many thousands of others, trapped in the wreckage of buildings, would have been saved.

This is the sort of mistake we must guard against by forming strong community Civil Defense programs. You can survive A-bomb attacks on your city or town—but you cannot do it alone. You must train yourself to be a cog in a smooth working set-up, if you are ever needed.

You also must be prepared to act as an individual, for attack may come without warning, and there may be no time for an alert.

Paste these words inside your

medicine cabinet where you see them every morning and every night:

*If I ever see a brilliant flash, I've got to get behind something. I'VE GOT ONE SECOND!*

You can make it in one second. In the street, dive for the protecting rim of the curb. On the golf course, hit that sand trap or hazard. Out in the open, hit the dirt! Any little mound or contour is able to provide enough protection to save your life.

Remember that in the first second of the explosion 50% of all the radiation that is going to be released has been released. By getting behind something during that second you cut the radiation dose in half. *This can be what saves your life.*

Paste this in your memory too: "The minute an alert sounds, put as much mass as possible—earth, concrete, steel—between you and the bomb. Stay where you are for exactly two minutes after the explosion. *These are the two minutes that can save your life!*"

Radiation does not linger. The death-dealing invisible rays are themselves dead within two minutes after the explosion.

When the two minutes that can save your life have passed, not only is it safe—but an obligation—to leave your place of shelter. You have lived through an A-bombing, and you must join in the effort to save *others*.

Today's A-bomb, and the more powerful H-bomb, are more destructive than the bombs exploded over Japan. But as far as radiation is concerned, they are little, if any, more dangerous than these earlier weapons.

Is it true that, as a survivor, you face the cruel certainty of cancer, leukemia, blindness, sterility, deafness, lung damage, or loss of hair? Are all unborn babies in the bombed area marked for doom?

These are the questions you ask. You should know the answers NOW if they are to be of any value should the danger ever materialize. These are the facts as I have learned them, based on an eight-year study of the Japanese survivors:

## *Radiation Sickness*

In modern bombing, radiation reaches lethal proportions. If you are unprotected and close enough to the

spot over which the bomb explodes, you can receive a fatal overdose of radiation. If you are a survivor, how will you know whether you have received this overdose? With a sizable overdose a few hours after exposure, you will be listless and sick to your stomach. If you were subjected to a small overdose, these symptoms may not show up for 10 days or two weeks. Despite the Gloomy Gus rumor-mongers, radiation sickness is infrequently fatal.

## *Cancer*

This is one of the greatest fears, but I can say that it is groundless in the light of our present knowledge. I believe that this is a vicious rumor, and that future studies will bear me out.

## *Leukemia*

Of the 15,000 casualties of both Hiroshima and Nagasaki on whom we have maintained continuing scientific studies, less than 150 developed leukemia. This represents a greater incidence of the disease than occurred in our "control" group of Japanese from non-radiated areas. But every leukemia victim who has turned up was within 1000 yards of the spots over which the A-bombs exploded.

## *Blindness*

People who are unprotected may be temporarily blinded by the brilliant light or by radiation heat waves. This loss of sight may last from five minutes to something less than an hour, and then complete vision is restored.

However, A-bomb radiation apparently is responsible for a marked increase in cataracts. Because we have learned that, we are better prepared to deal with this disease, and to eliminate it before it reaches the danger point. Blindness does not represent a major threat.

## *Sterility*

If you are an A-bomb survivor you may soon become impotent or sterile, unless you are beyond the range of significant radiation. *But this is only temporary.* In almost all of the cases we have studied, sterility will disappear in less than six months.

## *Deafness*

I have been able to discover no signs that exposure to A-bombing

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# WHAT CAN YOU OFFER?



(Photo from Reading Times)

*One of three 13-ton tractor trailers offered to Civil Defense by a civic-minded company in Boyertown, Pa. They will be used to transport litter patients in case of any disaster.*

A GREAT DEAL of the emphasis in the past two years has been, "What is Civil Defense doing for me?" The question really is "What are *you* doing for Civil Defense?" When every company and individual realizes that the emphasis must be in that direction, then disaster preparedness will take on real life and actuality.

A particularly fine example of what we mean has been given by a company in Berks County, which has offered the Medical Division of that County three 13-ton tractor-trailer trucks, each capable of carrying 50 litter patients, together with mechanical lifts to handle them. In addition, they have offered a six-story steel and concrete reinforced building to be used in case of need as an emergency hospital. The company is the Boyertown Burial Casket Company, one of the largest firms of its kind in the world.

These trucks, capable of carrying such a large number of litter patients, are the only ones of their kind anywhere in the east. All loading of victims will be done automatically with mechanical lifts, which go through the center of the van. Ordinarily, the trucks are used to transport caskets. They are 12½ feet high, from ground level to the top, and will first be put into civil defense operation during the June 14th alert, officials of the medical division reported. They will be manned by regularly appointed drivers of the company.

In addition, Mr. Lester Strunk, production manager of the Boyertown firm, offered the county CD officials the complete facilities of the company's six-story building. More than 2000 patients could be accommodated in the building, which has its own power and water system, as well as two-way communications. A large elevator that

will accommodate at least eight litter patients, runs from the ground floor to the top of the building; this will facilitate the movement of victims in case of emergency.

Hundreds of industries, of business concerns, and of individuals have plant, equipment, or services which in an emergency they would probably offer immediately for the use of their fellow man. How can we put it across to them that it would be of inestimable help if they would make known those facilities now, prior to an emergency? How else can the officials responsible for disaster-planning know what is available, base their plans on the local resources, or integrate the services into the community's plans?

Each company, each community, each CD worker, each reader of this article is urged to offer NOW whatever skill, equipment or service he or she has at his command, so that it may be included in the plans.

In the light of ever more powerful weapons, we must forge an ever-more effective force to offset the destruction—this means increased numbers of medical aides, auxiliary police, welfare workers, drivers, telephonists, and rescue teams; it also means every available truck, strong building, blanket, auxiliary generator, portable light, or length of hose. Let your CD office know what you could offer in a time of disaster; get it on record NOW. Waiting till the need occurs will create appalling and unnecessary confusion. Report what you have, where it will be, who will be in charge of it. That is not much to ask; but if each of us would sit down and do it now, what a help it would be!

## Dispersal (Continued from page 1)

and that on public warnings the people should attempt to leave our cities."

City authorities feel as strongly as the State Directors. Paul B. Hartenstein, Director for Philadelphia, is making careful studies regarding the feasibility of dispersal for his city, but emphasized that *no evacuation plan will be put into effect* in Philadelphia until better warning is available—"which may be many months," he said.

"If a red alert comes tonight," he warned, "the only thing to do is to take shelter. There can be no evacuation now."



# AROUND THE STATE

## Lucky Coincidence!

By an amazing chance, the State Police patrols of the Harrisburg, York, Chambersburg, Lykens and Bloomsburg areas were setting up road blocks as a part of a routine CD test when a real alarm was passed concerning an attempted robbery of the Shiremanstown State Bank (Cumberland County), which had just occurred.

Donald J. Drewitt, the would-be robber, made a getaway; the State police got the report, and set up additional road blocks at all Turnpike interchanges and main roads. Forty-five minutes after he left the bank, they caught the culprit as he entered the Carlisle interchange to the Turnpike.

## CD Pipes to the Rescue

Altoona was faced with a serious water shortage this winter, when the total quantity of water in three of its reservoirs fell to 23% of full capacity. At the same time between one and two million gallons of water were going to waste at the Allegheny Reservoir. In order to transfer this water into the main city distribution system at Altoona it was necessary to install pumping equipment, and construct temporary pipe lines along the ground to carry the overflow to the waterless sections of the city.

The margin of safety was so low, that Governor John S. Fine declared a state of emergency which immediately set machinery in motion to provide the city with 10,000 feet of pipe and three pumps from civil defense stockpiles.

Both Philadelphia and Pittsburgh jumped right in to help the stricken city. Trucks from the New Enterprise Stone and Lime Company headed for Pittsburgh to pick up 10,000 feet of 8 inch pipe, weighing about 50 tons, and to Philadelphia to pick up three 1500-gallon-per-minute pumps, each weighing 6000 pounds.

Within three days the emergency equipment was installed at the Allegheny reservoir. This emergency called into play not only federal CD stockpiles, and a fine example of mutual aid among counties and workers, but it also called out part of Altoona's Welfare section. Members of the Civil Defense welfare division prepared, transported and served hot drinks and food for the weary men

working hip-deep in mud and cold water.

Again we have another illustration of the uses and values of Civil Defense teams for all sorts of emergency situations, not merely for those caused by enemy attacks.

## Litter Bearers in Oil City

Over 200 boys in the Oil City Senior High have completed a course in the recovery and transportation of wounded, and will be ready to serve as litter bearers in case of emergency, it has been reported by the Civil Defense Director of Venango County, Mr. Harold Clark. Furthermore the school authorities have assured Mr. Clark that this training will become a regular part of the physical education program of the school, so that each year a new group will be trained in this type of medical work. Other schools in the County are preparing to follow suit.

Sturdy teen-age boys, too young for military service, could be put to valuable use in this capacity throughout the Commonwealth, if, in advance of any need, they received training in the techniques of handling wounded. Congratulations to Oil City for this forward step, increasing their emergency resources so valuably.

## Not One City—Many

Philadelphia, in terms of population, (measured in central city areas only) could absorb the total populations of Pennsylvania's eleven largest cities, and still have an additional 300,000 men, women, and children, or another entire city about the size of San Diego, California. Since Civil Defense is, in large measure, a matter of human lives, one can begin to see the magnitude of the job taxing Philadelphia's defense planners.

If you take the World Almanac for 1953, you will see that Philadelphia's central city population totals 2,071,605. Measuring central city areas of our other largest cities you find they follow in this order:

Pittsburgh 676,806  
Allentown-Bethlehem-Easton 208,728  
Erie 130,803; Scranton 125,536  
Wilkes-Barre-Hazleton 112,317  
Reading 109,320; Harrisburg 89,544  
Altoona 77,177; Lancaster 63,774  
Johnstown 63,232; York 59,953

These total: 1,717,909

## H-Bombs *(Continued from page 1)*

bulky, and thus more difficult (and finally impossible) to deliver by air. This fact introduces a complicated power-deliverability equation which probably reduces to well below "the limit of blow-out" the power of a bomb deliverable by air at continental ranges.

All in all, it is a reasonable guess that both this country and the Soviet Union will settle on a working-model hydrogen bomb of, say, ten to fifteen megatons.

This will destroy or damage an area of something like 60 square miles, and the radius of destruction will be from eight to fourteen miles (depending on how "destruction" is defined) from the point of explosion. This is quite enough, after all, to tear the heart out of a great city.

Yet, for what consolation it may provide, one hundred such bombs exploded on this country would destroy or damage only about  $\frac{1}{500}$ th of the total land area of the United States. In short, even after a hydrogen war, a great deal of the United States will physically survive intact.

Unfortunately, this very moderately reassuring fact does not assure the survival of the United States as a functioning national society. The fact that there is some upper limit to the damage which can be inflicted by a hydrogen bomb only suggests that despair is not necessary.

A really effective air defense could drastically reduce the number of enemy bombs delivered on American targets. A really effective civil defense could make certain that the nation continued to function as an organized, disciplined society, at least on a skeletal basis, after an attack.

Add that this Administration has publicly announced the decision to base national strategy on a policy of "massive retaliation" with new weapons. Add that the American intelligence fully supports Winston Churchill's statement that the hydrogen bomb is now "in large scale production in the Soviet Union."

A really all-out national effort in the air defense and civil defense fields then seems clearly indicated. But if this kind of national effort is being planned, the planning is very quiet indeed.

Great Britain will conduct defensive tests against biological warfare in the Bahama Islands this year, Supply Minister Duncan Sandys has announced.



## Radiation *(Continued from page 5)*

leads to wholesale deafness. Strangely enough, the unearthly blast of the A-bomb appears to have no significant effect on the eardrum.

### *Lung and intestinal damage*

There is no indication in Japan that A-bombing resulted in primary damage to the lungs or the digestive organs.

### *Loss of hair*

If you survive an A-bombing, and were close enough to get a significant dose of radiation, you probably will lose all, or most, of your hair within two weeks. But you will just as likely have a luxuriant growth of new hair within seven months, usually heavier in texture but lighter in color.

### *Pregnant survivors*

The simple and cruel truth is that A-bombing will take its toll of unborn babies among the stricken area's population. However, pregnant women in the areas beyond the zone of dangerous radiation were not affected.

Let us not deceive one another, nuclear warfare is a terrible thing. But radioactivity is not the major threat. The chief dangers stem from heat and blast, both of them phenomena with which we have been familiar for a long time. Radiation will not cause cancer, permanent sterility, loss of hearing or sight. It will not make people permanently bald. There is a chance that cataracts will develop in the eyes, but these can be dealt with.

Never forget that modern attack would be violent, would take many lives, but *remember that radiation sickness is rarely fatal*. And don't be alarmed by the rumor-mongers.

If bombs ever should explode over your community you can minimize the effects by knowing what to do—and by doing it immediately and automatically. You can be, and should be, a vital cog in our country's defense.

Nature herself is still far more destructive than any man-made weapon. For example, the last great earthquake in Assam, between Pakistan and Burma, exerted more force than could be generated by three million Hiroshima-sized A-bombs, according to a recent article in a national magazine. It would have required no less than 60,000 one-megaton bombs, each equivalent to one million tons of TNT to match Nature's violence on that occasion, yet a good many thousands of people lived through it.

(From a speech by Katherine Howard Deputy, FCDA)

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## Smuggled *(Continued from page 3)*

thirty inches; breech block devices might seal the barrel, concealing the bore which might range from two to ten inches. The outer diameter could range from about five inches to twelve. The tube and the two breech blocks could be smuggled in as three separate pieces. The fissionable material might be concealed in the barrel, or it might be carried in separate packages and the whole device assembled later.

Since the size can now be so small, the weight of these devices is their best giveaway. Uranium and plutonium weigh half again as much as lead of the same size. Fifty pounds of these heavy fissionable materials would be approximately five inches in diameter if in the shape of a sphere, or, as stated before, the size of a softball.

The official authorized description of atomic devices that could be used for sabotage (dated Dec. 21, 1953) states:

"In order that citizens of the United States may intelligently assist in the defense of our country, they should have sufficient information regarding atomic weapons to enable them to recognize bombs or parts of bombs which might be smuggled into the United States by enemy agents."

Please pass this information on in any way you can.

Merchant ships moving up and down the nation's coast are about to become advance outposts of the aircraft warning network. The new wrinkle in air defense was announced recently by the Air Defense Command, after a secret, two-month test involving crews of 250 ships calling at Providence, and other East Coast ports.

(FCDA Press Digest)

## Mobility *(Continued from page 3)*

order, and a minimum of waste-motion in a time of total confusion.

In thinking of mobility, one must be prepared to be flexible. This generation has lost its legs. It may have to regain them quickly sometime. Vehicles may have to assemble at some central point; planning of this sort should be done in advance. Where, in your town, would the best assembly place be? Areas adjoining rivers or waterways should not ignore the possibilities not only of evacuating casualties or homeless by water, but also of moving working-units by water to a place where other transportation can be met.

Recently in a British Civil Defense exercise, the practicability of using ordinary river craft was tested. A typical "pleasure-boat" was used to carry mobile medical teams and hospital groups to an island. There "casualties" with mock wounds were given first aid, embarked on the river boat and evacuated safely. Many communities in Pennsylvania may also find the waterways in their locality of great value in a major disaster.

## Two-Edged *(Continued from page 4)*

fuss was asked to take over New Jersey's defense.

Behind its success, its officials believe, lies the secret of being able to keep people interested. A test alarm one Saturday afternoon a few months ago brought 1500 volunteer auxiliary police swarming into Teaneck Armory from Bergen and Passaic Counties—a showing that amazed and delighted even the most confident state officials.